

Department of the Interior
United States Geological Survey

Multichannel Seismic-Reflection Data Collected in 1978 in the Eastern Chukchi Sea

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The U.S. Geological Survey (USGS) collected approximately 2520 km of 24-channel seismic-reflection data in the eastern Chukchi Sea from late August through late September 1978, over the continental shelf in the Chukchi Sea (figure 1). The profiles were collected on the USGS Research Vessel S. P. Lee. The seismic energy source consisted of a tuned array of five airguns with a total volume of 1326 cubic inches of air compressed to approximately 1900 psi. The recording system consisted of a 24-channel streamer, 2400 meters long with a group interval of 100 m and a GUS (Global Universal Science) model 4200 digital recording instrument. Shots were fired every 50 meters. Navigational control for the survey was provided by a Marconi integrated navigation system using transit satellites and Doppler-sonar augmented by Loran C (Rho-Rho). A 2-millisecond sampling rate was used in the field; the data were later desampled to 4-milliseconds during the demultiplexing process. 8 seconds data length was recorded. Processing was done at the USGS Pacific marine geology Multichannel Processing Center in Menlo Park, California, in the sequence: editing-demultiplexing, velocity analysis, CDP stacking, deconvolution-filtering, and plotting on an electrostatic plotter.

The data are available in the following formats:

- 1) Electrostatically plotted profiles which have been deconvolved and filtered after stacking. Copies of the profiles are available for download from the NOAA/National Geophysical Data Center.

- 2) Digital stack data which have been processed using velocities derived from the velocity analysis. These tapes are not deconvolved or band-pass filtered. Copies of the data are available for download from the NOAA/National Geophysical Data Center.
- 3) Digital demultiplexed data edited for missed shots, blanking times, and muting times. For additional information on demultiplexed data, please contact;

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